

Unit 8 Outline – Chapters 12 (p. 317-338) and 13 (p. 339-352)
Blood (8a) and Cardiovascular System (8b)

Anatomy and Physiology – Mrs. Michaelsen

Chapter Objectives:

1. Describe the general characteristics of blood, and discuss its major functions. (Unit 8a)
2. List the formed elements of the blood and identify the most important function of each. (Unit 8a)
3. Distinguish between the five types of white blood cells, and give the function(s) of each type. (Unit 8a)
4. Discuss anemia in terms of red blood cell numbers and hemoglobin content. (Unit 8a)
5. Describe the functions of each of the major components of blood plasma. (Unit 8a)
6. Explain the steps involved in blood coagulation – be detailed. (Unit 8a)
7. Describe ABO and Rh blood typing. (Unit 8a)
8. Describe how blood reactions may occur between fetal and maternal tissues. (Unit 8a)
9. Discuss the location, size, and position of the heart in the thoracic cavity. (Unit 8b)
10. Explain the structure of the coverings of the heart and describe the three distinct layers composing the wall of the heart. (Unit 8b)
11. Identify and describe the heart chambers, valves, and sounds. (Unit 8b)
12. Describe the major cardiac valve disorder mitral valve prolapsed (MVP). (Unit 8b)
13. Describe the flow of blood through the heart beginning with the right side. Be sure to include the chambers, valves, and vessels blood travels through in the correct order (see the heart diagram and terms on the second page below). (Unit 8b)
14. List the components of the heart conduction system and discuss the features of a normal electrocardiogram, including the P wave, QRS complex, and T wave. (Unit 8b)
15. Explain the factors that control the regulation of the cardiac cycle. (Unit 8b)
16. Using the Topic of Interest on page 354, describe the arterial disease atherosclerosis. Include in your answer the risk factors for its development and treatment techniques currently used today. (Unit 8b)

Other Assignments/Activities:

- Unit 8a – Blood
 - Blood coloring

- Unit 8b – Cardiovascular System
 - Check Your Healthy Heart IQ
 - Observe coronary artery bypass surgery at Medline Plus website – as a class.
 - Label heart and color code it – will go through in class.
 - Cardiovascular coloring pages (2)

Website: Access at <http://www.chetekhighscience.yolasite.com>

- Use the link posted on the website to read more about erythroblastosis fetalis and respond according to the posted directions.
- Article review with questions: Does Stress Really Cause Heart Disease? See website for instructions and submission details.

Be able to label a diagram of the heart with the following terms: (Unit 8b)

- | | |
|---------------------|----------------------------|
| a. Right ventricle | i. Bicuspid valve |
| b. Left ventricle | j. Chordae tendinae |
| c. Right atrium | k. Papillary muscle |
| d. Left atrium | l. Interventricular septum |
| e. Aorta | m. Tricuspid valve |
| f. Vena cava | n. Aortic valve |
| g. Pulmonary artery | o. Pulmonary valve |
| h. Pulmonary vein | |

